

Abstract

A starting device (1) for an internal combustion engine has a switching control device (7) for controlling a starter motor (2). At least one power switching module (4, 5) connects the starter motor (2) to a voltage source (6), and is activated via an assigned control line (16, 18). A control electronics (15) is provided for controlling the at least one power switching module (4, 5). A release device (29 - 36) which records the power flow of the internal combustion engine makes available, as a function of the running of the internal combustion engine, a release signal for the release of the activating switching procedure by the at least one control line (16, 18). The release device (29 - 36) includes a first release switching channel (22) that works independently of the control electronics (15) and a second release switching channel (26) that cooperates with control electronics (15). These are set up in such a way that an initiation of the activating switching procedure takes place only during the simultaneous release switching setting of the two release switching channels (22, 26). A diagnosis device (40 - 45) of the switching control device (7), at the ending of making available the release signal for the activating switching procedure by the release device (29 - 36), records the release switching setting of the first release switching channel (22). This makes possible the monitoring of the function of the first release switching channel (22), which increases the safety of the starting procedure. A method utilizing the components described for starting an internal combustion engine is also described.

Figure 1